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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,436	03/18/2005	Gerard Petroz	034299-626	4303

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EXAMINER	
PHAM, THANHHA S	
ART UNIT	PAPER NUMBER
2813	
MAIL DATE	DELIVERY MODE
06/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,436	PETROZ, GERARD	
	Examiner	Art Unit	
	Thanhha Pham	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *5/1/2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/01/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1. Oath/Declaration filed on 3/18/2005 has been acknowledged.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

► With respect to claim 1,

line 2, "a compound of this material" renders the claim indefinite. It is not clear that "a compound of this material" is actually a compound of which material. Applicant is respectfully suggest to clarify and use appropriate consistent claim language to clarify scope of claim.

line 2, "this electrode" lacking antecedent basis should be changed to "the at least one electrode" to clarify scope of claim.

line 3, "the II-VI semiconductor" lacking antecedent basis should be changed to "the II-VI semiconducting material" to clarify scope of claim.

line 4, "the electrode" lacking antecedent basis should be changed to "the at least one electrode" to clarify scope of claim.

- With respect to claim 2,

  lines 1-2, "a gold or platinum chloride solution in pure hydrochloric acid" should be changed to "a gold chloride or platinum chloride in pure hydrochloric acid" to clarify scope of claim.

- With respect to claim 3,

  lines 1-2, "the concentration of gold or platinum chloride" should be changed to "a concentration of gold chloride or platinum chloride" to clarify scope of claim.

- With respect to claim 4,

  line 1, "the surface of the material" lacks antecedent basis.

- With respect to claim 5,

  line 1, "the surface of the material" lacks antecedent basis.

- With respect to claim 6,

  line 2-3, "a solution of bromine and **preferably** pure hydrochloric acid is used for the chemical etching" renders the claim indefinite. Scope of claim can not be defined since it is not clear which solution is actually used for chemical etching. See MPEP 2173 for details -- A narrower range or preferred embodiment may also be set forth in another independent claim or in a dependent claim. If stated in a single claim, examples and preferences lead to confusion over the intended scope of the claim. In those instances where it is not clear whether the claimed narrower range is a limitation, a rejection under 35 U.S.C. 112, second paragraph should be made. Examples of claim language

which have been held to be indefinite are (A) "a temperature of between 45 and 78 degrees Celsius, preferably between 50 and 60 degrees Celsius"; and (B) "a predetermined quantity, for example, the maximum capacity." While a single claim that includes both a broad and a narrower range may be indefinite, it is not improper under 35 U.S.C. 112, second paragraph, to present a dependent claim that sets forth a narrower range for an element than the range set forth in the claim from which it depends.

- With respect to claim 7,

  line 1, "the material" lacks antecedent basis.

- With respect to claim 8,

  line 1, "the electrode" lacking antecedent basis should be changed to "the at least one electrode" to clarify scope of claim.

  lines 1-2, "a material which ..." renders the claim indefinite. It is not that "a material..." as being claimed is actually the II-VI semiconducting material of "a material..." as being claimed is an additional different material. Applicant is respectfully suggested to clarify and suggest appropriate consistent claimed language.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4 and 7-8, as being best understood, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over D De Nobel [US 2,865,793].

► With respect to claims 1-2, 4 and 7-8, D De Nobel (figs 1-2, cols 1-2) discloses the claimed method for manufacturing at least one electrode on a II-VI semiconducting material, the at least one electrode being in a metal (gold contact, col 2 lines 14-21) for which a work function is inherently substantially equal or larger than that of the II-VI semiconducting material (CdTe), this method being characterized in that the at least one electrode is formed by electrochemical deposition of the metal from a solution of a chloride of the metal in pure hydrochloric acid, wherein the metal is gold or platinum (gold) and a gold chloride or platinum chloride solution (gold chloride solution) in pure hydrochloric acid (hydrochloric acid would be inherently pure – containing no contaminant or device would be degraded), wherein a surface of the II-VI semiconducting material would be inherently prepared before depositing the at least one electrode in order to make this surface of the II-VI semiconducting material capable of fixing the material.

► With respect to claim 3, the claimed concentration of gold chloride or platinum chloride is considered to involve routine optimization while has been held to be within the level of ordinary skill in the art. As noted in In re Aller 105 USPQ233, 255 (CCPA 1955)., the selection of reaction parameters such as temperature and concentration would have been obvious.

"Normally, it is to be expected that a change in temperature, or in concentration, or in both, would be an unpatentable modification. Under some circumstances, however, changes such as these may be impart patentability to a process if the particular ranges claimed produce a new and unexpected result which is different in kind and not merely degree from the results of the prior art...such ranges are termed "critical ranges and the applicant has the burden of proving such criticality... More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."

See also In re Waite 77 USPQ 586 (CCPA 1948); In re Scherl 70 USPQ 204 (CCPA 1946); In re Irmscher 66 USPQ 314 (CCPA 1945); In re Norman 66 USPQ 308 (CCPA 1945); In re Swenson 56 USPQ 372 (CCPA 1942); In re Sola 25 USPQ 433 (CCPA 1935); In re Dreyfus 24 USPQ 52 (CCPA 1934).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 5-6 and 8, as being understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over D De Nobel [US 2,865,793] in view of Janik et al

["Ohmic contacts to p-type cadmium telluride and cadmium mercury telluride", Journal of Physics, Vol 16, pp 2333-2340 (1983)].

► With respect to claims 5-6, D De Nobel substantially discloses the claimed method but does not expressly teach using a solution of bromine or pure hydrochloric acid for chemical etching to prepare the surface of the II-VI semiconducting material before depositing the at least one electrode. However, Janik et al teaches using a solution of bromine or pure hydrochloric acid (bromine) for chemical etching to prepare the surface of the II-VI semiconducting material before depositing the at least one electrode. Therefore, at the time of invention, it would have been obvious for those skilled in the art to modify process of D De Nobel by using the solution of bromine or pure hydrochloric acid for chemical etching the surface of the II-VI semiconducting material before depositing the at least one electrode as taught by Janik et al to obtain low resistance ohmic contact to the at least one electrode.

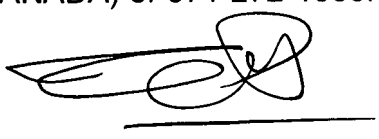
► *With respect to claim 8, CdZnTe, CdTeCl, CdTeSeCl, CdZnTeCl, CdTeIn, CdZnTeIn and CdHgTe are known II-VI semiconducting material.* Selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945) "Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in the last opening in a jig-saw puzzle." 325 U.S. at 335, 65 USPQ at 301. See also In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) (selection of a known plastic to make a container of a type made of plastics prior to the invention was held to be obvious).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhha Pham whose telephone number is (571) 272-1696. The examiner can normally be reached on Monday and Thursday 9:00AM - 9:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



TSP

THANHHA S. PHAM
PRIMARY EXAMINER